FY2011: Regional Integrated Ocean Observing System Development

U.S. IOOS® is an operational system and a network of regional partners responsible for regional observations, data management, modeling and analysis, education and outreach, and research and development. The overarching purpose of U.S. IOOS is to address regional and national needs for ocean data and information. NOAA continued a merit-based funding process in 2012 to further development of the IOOS regional network. IOOS regional partners provide coordination with regional stakeholders while contributing data and other outputs to the national system – supporting regional priorities while advancing national objectives.

GREAT LAKES REGION

The Great Lakes Observing System provides coverage for the coastal zone within the states of New York, Pennsylvania, Ohio, Indiana, Illinois, Wisconsin, Minnesota, and Michigan, bordering on the Great Lakes and St. Lawrence River.

NOAA Funding:

Prior to FY 2011, IOOS regional partners received two awards – one for development of the Regional Coastal Ocean Observing System (RCOOS), and one for planning and stakeholder engagement by a Regional Association (RA). Starting in FY 2011, IOOS made a single award to each region for management of these activities. Funds awarded by NOAA since establishment of the U.S. IOOS Program Office are as follows:

FY 2012 - $1,726,000
FY 2011 - $1,400,000
FY 2010 - $1,080,815 RCOOS, $400,000 RA
(In FY 2010, the Environmental Protection Agency provided a total of $3,000,000 for GLOS observing and modeling activities in support of the Great Lakes Restoration Initiative. Of this total, $730,815 was included in the RCOOS award.)
FY 2009 - $350,000 RCOOS, $400,000 RA
FY 2008 - $350,000 RCOOS, $400,000 RA

Regional Priorities:

The only freshwater region of IOOS, the Great Lakes is home to over 40 million US and Canadian citizens, many tribal groups, eight states and two provinces. The region's coastline totals nearly 11,000 miles, and the Great Lakes and their connecting channels form the largest fresh surface water system on Earth, holding nine-tenths of the U.S. fresh surface water supply. The Great Lakes Observing System (GLOS) was formed to coordinate the regional observing network that plays a critical role in the management of these valuable resources.

In addition to addressing issues similar to other IOOS regions (e.g., spill response, search and rescue, beach quality, and beach hazards such as rip and channel currents), GLOS is also positioned to address unique regional issues

resulting from its freshwater composition and geography. These issues include source water protection; providing baseline data to managers of Great Lakes Areas of Concern (AOCs) and Lakewide Management Plans (LaMPs); identifying, collecting and integrating key fishery and associated environmental (physical, chemical and biological) observations to support state and provincial fishery managers; understanding the impacts of climate change upon net basin water supplies; assisting municipal/regional planners in adapting to climate change; and prioritizing maintenance funds for key port and harbor infrastructure.

In 2012 GLOS will continue:

- Deployment and operation of observing system platforms, including buoys, autonomous underwater vehicles, gliders, and vessels of opportunity across all five Great Lakes;
- Working with NOAA's Coastal Storms Program to coordinate, in partnership with NWS, the purchase and deployment of at least one (1) buoy along the nearshore area of Lake Michigan near Grand Haven during the 2013-15 recreation seasons;
- Program management and partner coordination, including participation in Canadian-American Group on Earth Observations Great Lakes Testbed activities and the development of a regional Adaptive Management process;
- Data Management and Communication activities, to include identifying baseline information for measuring progress, continuing integration of existing priority data sets, and identifying priority opportunities for data standards, quality management system, and protocol development;
- Expanding the development of data management and decision support tools consistent with the recommendations of the 2011 GLOS Enterprise Architecture Design Report;
- Refining and enhancing existing tools as needed and identifying emerging opportunities for model and tool development;
- Serving as secretariat and facilitator of the Ecosystem Forecasting Modeling Framework Pilot for Lake Michigan;
- Growing the content of the Great Lakes Model Inventory;
- Outreach and education efforts including identifying priority targets for GLOS membership, evaluation of existing tools, and sustaining promotion and engagement activities;
- Working with the Great Lakes Sea Grant Network and a competitively selected contractor to convene municipal/regional planners and other infrastructure planners to provide input to DMAC, observations, tools and modeling sub-systems based on an initial evaluation of existing needs assessment activities relative to climate change; and
- Supporting Michigan Sea Grant to coordinate efforts among project partners in the region to promote the use/awareness of the *Teaching with Great Lakes Data* website that includes Great Lakes data, lessons and information about monitoring systems.

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